

Advertising S-BFD Discriminators in BGP

<https://datatracker.ietf.org/doc/draft-wang-bess-sbfd-discriminator>

H. Wang, Y. Huang, J. Dong @Huawei

IETF 113

Mar. 2022

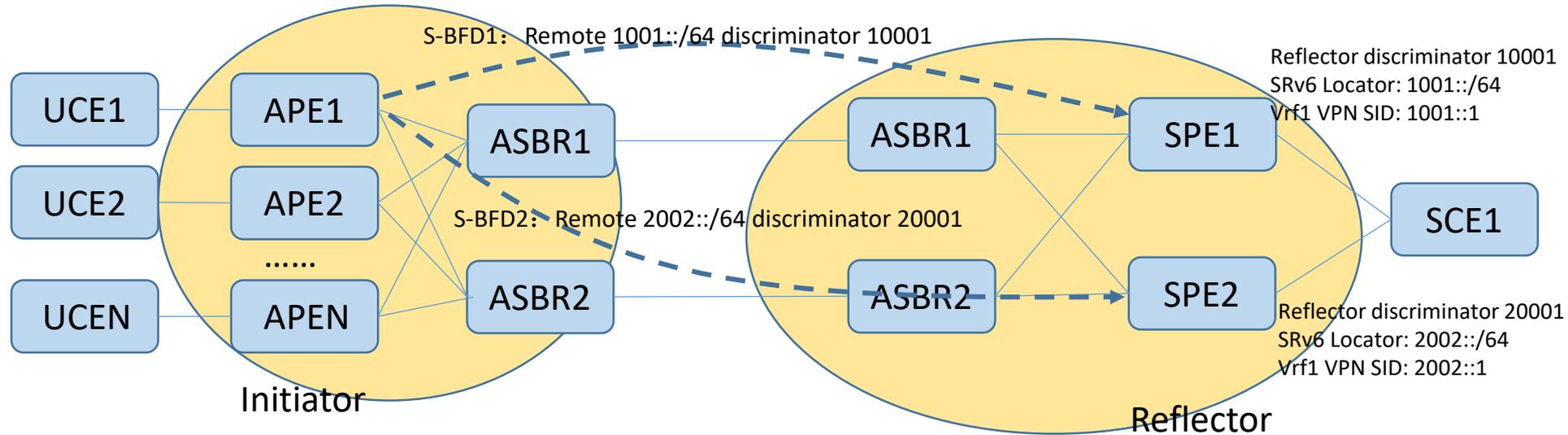
Changes from last version

- Updated the scenario description based on the review comments

Motivation

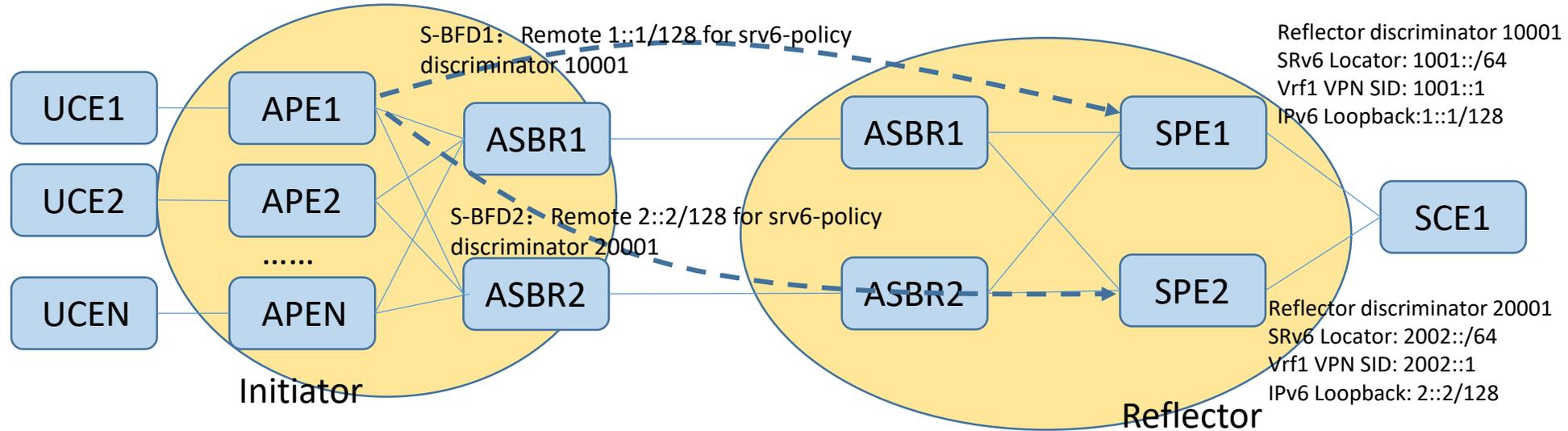
- S-BFD is useful for 3PE scenarios, it can save resources for one side PE
- For IPv6 network, the discriminator for each destination PE has to be configured, this process is complex
- Though [[RFC7883](#)] [[RFC7884](#)] defines IS-IS and OSPF extensions to flood the S-BFD discriminators, it doesn't satisfy inter-area or inter-domain scenario

Scenario1: Service Over SRv6 BE Use Case



- This is a typical 3PE inter-domain scenario with E2E SRv6 BE (the inter-area case is similar)
- User CE single-homed to Access PE (APE)
- Service CE multi-homed to Service Pes (SPE)
- Use S-BFD instead of BFD session, can save the resources of Service PE
- Each Access PE will create S-BFD session to detect Service PE's reachability
- Remote discriminator needs to be configured for each S-BFD session
- Create S-BFD session on remote SRv6 Locator prefix rather than VPNSID can also save resources

Scenario2: Service Over SRv6 Policy Use Case



- This is a 3PE inter-domain scenario with E2E SRv6 Policy
- User CE single-homed to Access PE (APE)
- Service CE multi-homed to Service Pes (SPE)
- Compared with scenario 1, the Access PE here will use SRv6 Policy for service
- Each Access PE will create S-BFD session for SRv6 Policy to detect the path to remote Service PE

Procedures

- S-BFD Reflector:
 - BGP VPN routes are advertised with the local discriminator carried in the BFD Discriminators attribute
 - BFD mode is set to one of the new modes defined
- S-BFD Initiator:
 - Notify the BFD module to create an S-BFD session with received discriminator
 - For Type TBD1, the SRv6 Locator prefix carried in the Source IP Address TLV is used as the destination of the S-BFD session
 - For Type TBD2, the tunnel-endpoint address carried in the Source IP Address TLV is used as the destination

Next steps

- Welcome more comments and discussion
- Revise the draft accordingly

Thank you!